

IN THE CLAIMS:

1. (Currently amended) A method for maintaining a data warehouse, comprising:

identifying a data source of interest;

updating a metadata to reflect information available from said source,

wherein said metadata comprises domain specific knowledge obtained by analyzing said data source, and wherein said metadata represents at least one abstract concept, at least one database description, at least one transformation and at least one mapping;

automatically generating a mediator based on said metadata, wherein said mediator comprises data management code, wherein said code defines a translation library and a mediator class; and

writing a wrapper for said source which calls said mediator, wherein said method is applied to data warehousing applications in the domain of functional genomics and proteomics.

2. (Original) The method of claim 1, wherein the step of updating a metadata comprises entering new types of information, new data formats for previously defined information, new transformations between data formats, and the schema of said source.

3. (Original) The method of claim 1, wherein said mediator is fully functional and is automatically generated by a stand-alone mediator generation program.

4. (Currently amended) The method of claim 3, wherein said mediator generation program automatically defines an API and translation libraries.

5. (Original) The method of claim 4, wherein said mediator comprises code to translate between source and target representations, possibly using externally defined methods, and load data into said warehouse.

6. (Original) The method of claim 1, wherein said wrapper makes use of said mediator.

7. (Original) The method of claim 3, wherein said mediator generation program defines a public data representation, wherein said wrapper uses said public data representation.

8. (Original) The method of claim 3, wherein said wrapper uses said mediator to load data into said warehouse.

9-17. (Canceled)

18. (Currently amended) A method for maintaining a data warehouse, comprising:

identifying a data source of interest;

updating a metadata to reflect information available from said source,

wherein said metadata comprises domain specific knowledge obtained by analyzing said data source, and wherein said metadata represents at least one abstract concept, at least one database description, at least one transformation and at least one mapping;

automatically generating a mediator based on said metadata, wherein said mediator comprises data management code, wherein said code defines a translation library and a mediator class; and

writing a wrapper for said source which calls said mediator, wherein said method is applied to data warehousing applications in the domain of protein sequence and structure analysis.

19. (Canceled)

20. (Original) The method of claim 1, wherein said method is used for integrating a new data source into a data warehouse.

21. (Original) The method of claim 1, wherein said method is used for updating a warehouse when a previously integrated data source is modified.

22-23. (Canceled)

24. (Currently amended) A computer-useable medium embodying computer program code for maintaining a data warehouse by executing the steps of:

identifying a data source of interest;

updating a metadata to reflect information available from said source,

wherein said metadata comprises domain specific knowledge obtained by analyzing said data source, and wherein said metadata represents at least one abstract concept, at least one database description, at least one transformation and at least one mapping;

automatically generating a mediator based on said metadata, wherein said mediator comprises data management code, wherein said code defines a translation library and a mediator class; and

writing a wrapper for said source which calls said mediator, wherein said method is applied to data warehousing applications in the domain of functional genomics and proteomics.

25. (Original) The computer-useable medium of claim 24, wherein the step of updating a metadata comprises entering new types of information, new data formats for previously defined information, new transformations between data formats, and the schema of said source.

26. (Original) The computer-useable medium of claim 24, wherein said mediator is fully functional and is automatically generated by a stand-alone mediator generation program.

27. (Currently amended) The computer-useable medium of claim 24, wherein said mediator generation program automatically defines an API and translation libraries.

28. (Original) The computer-useable medium of claim 27, wherein said mediator comprises code to translate between source and target representations, possibly using externally defined methods, and load data into said warehouse.

29. (Original) The computer-useable medium of claim 24, wherein said wrapper makes use of said mediator.

30. (Original) The computer-useable medium of claim 26, wherein said mediator generation program defines a public data representation, wherein said wrapper uses said public data representation.

31. (Original) The computer-useable medium of claim 26, wherein said wrapper uses said mediator to load data into said warehouse.

32-40 (Canceled)

41. (Currently amended) A computer-useable medium embodying computer program code for maintaining a data warehouse by executing the steps of:

identifying a data source of interest;

updating a metadata to reflect information available from said source,

wherein said metadata comprises domain specific knowledge obtained by analyzing said data source, and wherein said metadata represents at least one abstract concept, at least one database description, at least one transformation and at least one mapping;

automatically generating a mediator based on said metadata, wherein said mediator comprises data management code, wherein said code defines a translation library and a mediator class; and

writing a wrapper for said source which calls said mediator,

wherein said method is applied to data warehousing applications in the domain of protein sequence and structure analysis.

42. (Canceled)

43. (Previously presented) The computer-usable medium of claim 24, wherein said method is used for integrating a new data source into a data warehouse.

44. (Previously presented) The computer-usable medium of claim 24, wherein said method is used for updating a warehouse when a previously integrated data source is modified.

45-47 (Canceled)

48. (Currently amended) A method for maintaining a data warehouse, comprising:

identifying a data source of interest;

updating a metadata to reflect information available from said source,

wherein said metadata comprises domain specific knowledge obtained by

analyzing said data source, and wherein said metadata represents at least one

abstract concept, at least one database description, at least one transformation
and at least one mapping;

automatically generating a mediator based on said metadata, wherein
said mediator comprises data management code, wherein said code defines a
translation library and a mediator class; and

writing a wrapper for said source which calls said mediator,
wherein said method is applied to data warehousing applications in the domain
of astrophysics and climate modeling.

49-51. (Canceled)

52. (Previously presented) The method of claim 1, wherein said
method is used for integrating a new data source into a data warehouse.

53. (Previously presented) The method of claim 1, wherein said
method is used for updating a warehouse when a previously integrated data
source is modified.

54. (New) The method of claim 1, wherein said translation library
provides a data representation for said domain specific knowledge, including at
least one "get" and "set" method for at least one attribute, wherein said at least

one “get” and “set” method calls at least one transformation method and derives a value of said at least one attribute if it is missing.

55. (New) The method of claim 1, wherein said mediator class defines at least one method that takes at least one object as input and traverses a data structure of said at least one object and enters information into said data warehouse.

56. (New) The method of claim 54, wherein said mediator class defines at least one method that takes at least one object as input and traverses a data structure of said at least one object and enters information into said data warehouse.